

Boston Board of Health

4/15/1914

**AN EARLY REPORT ON  
VACCINATION FOR SMALLPOX**



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# REPORT OF THE BOARD of HEALTH.

THE Board of Health for the town of *Boston*, are happy to have it in their power, this day, to announce to their fellow-citizens the result of one of the most complete experiments which perhaps has ever been made, to prove the efficacy of the *Cow-Pox*, as a preventive against the *Small-Pox*; and while they take the liberty to congratulate the public on this important discovery, they do earnestly recommend its introduction generally, and are confident that it will be the means of preserving the lives and adding to the happiness of millions.

The utmost care has been taken, during the experiments, and a detailed statement of facts are subjoined, for the gratification of every enquirer.

In June, 1801, Dr. *Jackson* addressed a letter to the Board of Health, requesting their countenance in certain experiments which he contemplated making, to prove the efficacy of the *Cow-Pox*, as a preventive against the *Small-Pox*; to which application the avocations of the Board would not permit that attention which the plan proposed by Dr. *Jackson* required.

In June, 1802, Dr. *Waterhouse* made a similar application, accompanied with a very minute history of that disorder, from himself, and also various documents in proof of its utility, from Societies in *New-York* and elsewhere, who had associated for the purpose of making experiments similar to those proposed to be made by Dr. *W.* by which it appeared, that the public in those places were deriving incalculable benefits by a pretty general inoculation. About this time the *Small-Pox* was raging in the family of Mr. *Holmes*, *Fifth-Street*, and three persons out of five, under the care of the Board of Health, had died.—The *Cow-pox* had obtained much credit.

The Board of Health, deeply affected with the fatal ravages of the *Small-pox*, in the family before mentioned, and viewing their institution as founded, under God, for the preservation of the health of their fellow-citizens; and believing, as they did, that this mild and safe disorder, "*the Cow-Pox*," might be substituted for that fatal and distressing one, the *Small-pox*, so that if generally adopted, completely to annihilate and blot it from the catalogue of human woes;—determined, under the influence of these considerations, to prove by experiments, to be made under their immediate observation, whether their faith in the efficacy of the *Cow-pox* was well founded or not.

With this view, the plan of the experiments proposed were published in the newspapers, for the consideration of their fellow-citizens. The Secretary of the Board was also directed, in their name, to desire the assistance of Doctors *Lloyd*, *Danforth*, *Rand*, *Jeffries*, *Warren*, *Jarvis*, and *Waterhouse*, who, agreeably to the invitation of the Board, met them at the Health-Office.—Various impediments prevented themselves carrying into effect the plan as published. It was alleged, that the distance of *Rainsford's-Island* from town, would prevent the attendance of the gentlemen concerned, as often as would be requisite; and to make them in town, it would be necessary to have the permission of the town, in town-meeting, it being contrary to law to inoculate with the *Small-pox* without it. It was therefore determined to apply for this privilege; and the town being assembled for that purpose, it was objected to, on the grounds that it would alarm the country, and injure the trade of the town.—After much debate, it was voted by the town:—"That the Board have power to make the experiments proposed, without the limits of the town; and to take up suitable buildings, &c. for that purpose." It was with much difficulty a place could be obtained, comporting with the vote of the town. But started in the pursuit, the object, the happiness of mankind, the Board was determined that no difficulties which perseverance could surmount, should divert them from their purpose.

At length Mr. *Williams* gave permission to erect a small building on *Noddle's-Island*, and to make the proposed experiments there. Thus provided, on the 16th day of August, nineteen children, viz.

*Daniel Scott*, *Chamber-Street*.  
*Almarin Clarke*, *Cornhill*.  
*John Sibley*, *Prince-Street*.

**OZIAS GOODWIN,** } *Charter-Street.*  
**GEO. GOODWIN,** }  
**SAMUEL WATTS,** }  
**SAMUEL RICHIE,** }  
**ROBERT WILLIAMS,** } *Cole Lane.*  
**HENRY WILLIAMS,** }  
**REUBEN LORING,** } *Willson's Lane.*  
**THOMAS TRUMAN,** }  
**E. L. TRUMAN,** } *Dogget's Alley.*  
**JOHN WYER,** }  
**SETH KING,** }  
**GEORGE FOBES,** } *Market-Square.*  
**WILLIAM AUSTIN,** } *Fifth-Street.*  
**JOHN HARRIS,** }  
**THOMAS SPEAR,** } *Friends-Street.*  
**WM. GREENE,** } *Hanover-Street.*

Were inoculated with the *Cow-pox*, at the Health-Office, in presence of the Board, and of a number of gentlemen invited. The physicians who attended were *Lloyd*, *Rand*, *Jeffries*, *Warren*, *Waterhouse*, *Welsh*, *J. C. Howard*, and *T. Danforth*; and the children went through the disorder to the satisfaction of the gentlemen physicians, and of this Board.

Fresh *Small-pox* matter being obtained, through the politeness of Dr. *Weeks*, the proprietor of the *Small-pox* Hospital at *Falmouth*—on the 9th of November, twelve of the children before named, together with *George Bartlett*, son of Dr. *Bartlett*, of *Charlestown*, who had the *Cow-pox* two years since, were inoculated at the Hospital erected on *Noddle's-Island*, with the *Small-pox*, from the matter obtained from Dr. *Weeks*—and at the same time two children of Mr. *Christopher Clark*, of *Hinckman's Lane*, viz. *Thomas* and *John*, who had never had either the *Cow-pox* or *Small-pox*, were also inoculated with the latter; and in the proper time the arms (of the two *Clark*s) became inflamed—the symptomatic fever, and usual appearances attending the *Small-pox*, appeared—and finally pustules to the amount of about 500 on one, and 150 on the other, put forth and mattered, as has been invariably the case in all instances of the *Small-pox* within our knowledge. From these two children, thus affected with the *Small-pox*, fresh matter was taken, and the thirteen children before named, who were totally unaffected with the first inoculation with *Small-pox*, were again inoculated on the 21st day of November; and the other seven children, who had the *Cow-pox* as first mentioned, were also inoculated with fresh matter from the *Clark*s; and the whole remained together in the same house, in the same room, and often in the same beds, without producing the least appearance of the *Small-pox*, either by uncommon forenses of the arm, head-ach, the least degree of fever or pustules—and this we certify to the public, having daily visited the Hospital ourselves, and made the most critical observations and inquiries, which are confirmed by the report of the physicians who attended the experiments (hereto annexed) and therefore are confident in affirming, That the *Cow-pox* is a complete preventive against all the effects of the *Small-pox* upon the human system.

## THE PHYSICIANS' REPORT.

WITH a view of ascertaining the efficacy of the *Cow-pox* in preventing the *Small-pox*, and of diffusing through this country the knowledge of such facts as might be established by a course of experiments instituted for the purpose, and thereby removing any prejudices, which might possess the public mind on the subject, the Board of Health of the town of *Boston*, in the course of the last Summer, came to a determination to invite a number of Physicians to cooperate with them on this important design; and with a liberality becoming enlightened citizens, erected a Hospital on *Noddle's-Island*, for carrying it into execution.—Accordingly, on the 16th of August last, nineteen boys, whose names are subjoined, were inoculated for the *Cow-pox* at the office, and in presence of the above-mentioned Board, with fresh, transparent *Cow-pox* matter, taken from the arms of a number of patients then under this disease. These all received and passed through the disease to the complete satisfaction of every person present, concurring with the disease.

On the 9th of November, twelve of the above children, together with one other, *George Bartlett* by name, who had passed through the *Cow-pox* two years before, were inoculated for the *Small-Pox* on *Noddle's-Island*, with matter taken from a *Small-pox* patient in the most infectious stage of that disease. The arms of these lads became inflamed at the incisions, in proportion to the various irritability of their habits, but not to a degree greater than what any other foreign, virulent matter would have produced. The *Small-pox* matter excited no general indisposition whatever, through the whole progress of the experiments, though the children took no medicines, but were indulged in their usual modes of living and exercise; and were all lodged prudently in one room.

At the same time and place, in order to prove the activity of the *Small-pox* matter, which had been used, two lads, who had never had either the *Small-pox* or *Cow-pox*, were inoculated from the same matter. At the usual time, the arms of these two patients exhibited the true appearance of the *Small-pox*. A severe eruptive fever ensued, and produced a plenteous crop of *Small-pox* pustules, amounting by estimation, to more than five hundred in one, and two hundred in the other.

When these pustules were at the highest state of infection, the thirteen children before mentioned, were inoculated a second time, with recent matter, taken from the pustules, which said matter was likewise inserted into the arms of the seven other children, who were absent at the first inoculation. They were all exposed, most of them for twenty days, to infection, by being in the same room with the two boys, who had the *Small-pox*, so that, if susceptible of this disease, they must inevitably have received it, if not by inoculation, in the natural way.

Each of the children was examined by the Subscribers, who were individually convinced from the inspection of their arms, their perfect state of health, and exemption from every kind of eruption on their bodies, that the *Cow-pox* prevented their taking the *Small-pox*, and they do therefore consider the result of the experiment as satisfactory evidence, that the *Cow-pox* is a complete security against the *Small-pox*.

JAMES LLOYD.

SAMUEL DANFORTH.

ISAAC RAND.

JOHN JEFFRIES.

JOHN WARREN.

THOMAS WELSH.

BENJAMIN WATERHOUSE.

JOSIAH BARTLETT.

JOHN FLEET, JUN.

JOHN C. HOWARD.

THOMAS DANFORTH.

*Charlestown, December 15, 1802.*

This may certify, that my son, *George Bartlett*, at the age of eight years, was inoculated for the *Cow-pox*, on the 11th day of November, 1800; that the appearance of his arm, and the symptoms, so fully corresponded with the plates and publications I had then seen, as to convince me, and others of my medical friends, that he had the *disease*.

JOSIAH BARTLETT,

*Fellow of the Mass. Med. Society,  
To the President and Members of the Board of Health,  
Boston.*

*Boston, Dec. 8th, 1802.*

We, *Susanna Truman* and *Lucy Learned*, nurses attending on the experiments corroborating the efficacy of the *Cow-pox*—do certify that there was not the least sickness or appearance of *Small-pox* among any of the children who were subjects of the same, during their stay at *Noddle's-Island*, excepting the two boys, *Thomas* and *John Clarke*, who had never had the *Cow-pox*, and were inoculated for the *Small-pox*, with a view to render the experiment more complete.

SUSANNA TRUMAN.

LUCY LEARNED.

*Health-Office, Boston, Dec. 16, 1802.  
Published by order of the Board of Health.  
ISAIAH DOANE, President.  
R. GARDNER, Secretary.*

*RUSSELL AND CUTTER, Printers.*

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## AN EARLY REPORT ON VACCINATION FOR SMALLPOX

There has recently been acquired by the Boston Medical Library, through the kindness of Mr. John Howland, of Boston, a fine copy of a broadside issued by the Board of Health of Boston December 16, 1802. Mr. Howland is a descendant of the brother of the then president of the Board of Health, Mr. Isaiah Doane, and the broadside was recently found among the family papers. Although not unknown, for there is a copy in the library of the Massachusetts Historical Society and also one in the office of the Surgeon General, Washington, this document, nevertheless, is one of great interest and deserves reprinting. A facsimile, somewhat reduced in size, is shown on the opposite page.

The facts which led to the printing of this broadside are, briefly, as follows. Dr. Benjamin Waterhouse received a copy of Jenner's book early in 1799 and published the first notice about it in a newspaper, March 12 of that year. On July 8, 1800, over a year later, he received some cowpox vaccine and vaccinated his five-year-old son—the first person to be so treated in America. The procedure, however, was not quickly adopted, many of the older physicians being against it and only a few of the younger practitioners carrying out this simple maneuver. Even in the summer of 1802, when there was an epidemic of smallpox in Boston, Waterhouse states: "The faculty in that town, with one exception, had not given it their decided approbation and countenance" and "the younger practitioners inoculated,\* now and then, a few, but scarcely enough to keep up a continuity of cases, for the preservation of the matter" (p. 48).† Thus it will be seen that without the help of the physicians of Boston and with the cowpox matter in danger of being lost on account of the infrequency of vaccination, Waterhouse was in no position personally to force the issue. Another factor, moreover, had appeared: persons outside of the medical profession were using cowpox vaccine and, as Waterhouse states: "Journeymen mechanics, apprentices, day labourers, and, in some instances, children inoculated each other." Thus a number of persons were unsuccessfully vaccinated or, in some instances, given secondary infections.

In order to overcome the situation, Waterhouse returned to the method which he had first used in acquainting the public with the value of vaccination. He published a letter in the *Columbian Centinel*, August 2, 1802, after previously reading the communication to the president of the Massachusetts Medical Society. In spite of this, the physicians of Boston would not accept vaccination, and finally Dr. Waterhouse made a direct appeal to the Board of Health in a long letter dated May 31, 1802. A brief history of vaccination was given, and Waterhouse asked for "a public experiment performed under your own inspection." Perhaps a little to Waterhouse's surprise, the Board of Health accepted at once, and the experiment was begun in August, 1802.

On August 16, nineteen boys, whose names and addresses are given in the broadside, were vaccinated with cowpox at the office of the Board of Health. On November 9 twelve of these boys, plus one boy who had been vaccinated two

\*In 1802 the verb "to inoculate" was used for both cowpox and smallpox.  
†A Prospect of Exterminating the Small Pox, Part II, etc. Cambridge, 1802.

years before, were sent to Noddle's Island in Boston Harbor, where a temporary hospital had been set up, and were directly inoculated with fresh smallpox matter. At the same time, two other boys were inoculated with the same material without having been previously vaccinated. Furthermore, on November 21 the thirteen boys who had been previously vaccinated and who had remained well, together with the other seven boys who had been vaccinated, were inoculated with "fresh matter" from the two unvaccinated boys, who had developed smallpox. The famous report of the ten physicians who, in addition to Benjamin Waterhouse, were invited to observe this experiment is printed in full in the broadside and ends with the italicized statement that the "*Cow-pox is a complete security against the Small-pox.*" Thus a decisive experiment had been carried out, which should have fixed forever the practice of vaccination in Massachusetts. Unfortunately, the results of this splendid example of a group experiment relating to health are still ignored by some presumably intelligent individuals.

Great credit should go to the children who submitted to this procedure and to the ten physicians who assisted Waterhouse, but particular honor should be given to the twelve citizens who formed the Board of Health. These men, one from each ward, performed their duties without financial compensation. Their president, Isaiah Doane, has left a rich heritage behind him as the result of this experiment and of the fine way in which he carried out a controversial matter. The broadside, moreover, is of particular interest to the medical profession, for it gives a more extended account of the procedure than is found in the book by Waterhouse, and it lists five doctors who served on the committee who were not given due credit in this publication.

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